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APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
10 045,439	11 07 2001	Ronald L. Hodge	08286 105005	4281

20786 7590 02 11 2003

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EXAMINER

STAHL, MICHAEL J

ART UNIT	PAPER NUMBER
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2874

DATE MAILED 02 11 2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/045,439

Applicant(s)

HODGE ET AL.

Examiner

Mike Stahl

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133)
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-51 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 07 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other:

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Double Patenting

Applicant is advised that should claims 40, 42, and 44 be found allowable, claims 49, 50, and 51 respectively will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 6, 8-9, 12, 15-21, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Toffetti (US 5313546).

Toffetti discloses an enclosure **11** for joining optical fiber cables, including a housing (with a base **16**), and a number of ports **14** and **15** (figs. 1-2). Although only two apertures (ports) are shown, Toffetti teaches that there may be more than just two ports **14** and **15** (claim 1, col. 3 lines 1-3). Furthermore, although the reference does not refer to “distribution” or “drop”

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cables or ports literally, it is apparent that the device is intended to join a number of distribution cables and it is asserted that branching off of drop lines is within the scope of the reference. Therefore the Toffetti arrangement anticipates independent claims 1 and 18 and dependent claim 12. As to independent claim 15 and dependent claim 24, the arrangement further includes a cover plate **17** and a sealing member **21** coupled to the cover plate.

As to claims 2, 17, and 19, the cables described in Toffetti are optical fiber distribution cables.

As to claim 6, the drop line would be coupled to the distribution cable through at least an optical splice, which can be considered an optical device.

Regarding claims 8, 9, 20, and 21, the Toffetti arrangement includes removable open drop plugs **23** which seal the drop port around drop lines (see also figs. 6-7).

As to claim 16, the arrangement includes drop plugs which seal around drop lines as described above, and the sealing member **21** seals the gap between the cover plate **17** and the housing **16** (along their respective surfaces **19** and **18**) and also seals the gap between the cover plate and the drop plugs **23** (col. 2 lines 42-45 and 51-55).

Claims 1-2, 6-7, 12, 18-19, and 25-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Mahony (US 6496641).

Mahony discloses an enclosure comprising a housing **500**, first and second ports providing access for distribution cables **401**, and drop ports providing access for drop lines **404**. See fig. 5. The various ports into housing **500** are not illustrated in fig. 5 but are inherently present. The drop lines are coupled to a distribution cable by way of an optical splitter **200**

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which is part of the splitter terminal package **199** (see fig. 2a). Thus Mahony teaches an arrangement which meets the limitations of claims 1-2, 6-7, 12, 18-19, and 25-26.

Claims 1-2, 6, 8-9, 11, 18-21, 23, 27-28, 31-32, and 35-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Schneider et al. (US 5495549).

Schneider discloses an enclosure **10** including a housing (generally **16** but also including frame **12**), first and second ports **21** and **18** for entry of distribution cables **25** and **27**, and a drop port **19** for entry of a drop line **26** (see figs. 1 and 2). The drop line can be coupled to one of the fibers from a distribution cable. Claims 1 and 18 are therefore satisfied by the Schneider enclosure.

As to claims 2 and 19, the distribution cables **25** and **27** are optical fiber cables.

Regarding claim 6, the drop line is coupled to a distribution cable by an optical splice.

As to claims 8, 9, 20, and 21, the enclosure includes open drop plugs **120** and **121** which seal the drop port around the drop line (see fig. 12).

As to claims 11 and 23, the enclosure includes a strain relief device coupling the drop line to the housing. The strain relief includes a support member (the frame **12**) coupled to the housing and has a clamp receiving portion. A clamping device **39** (hose clamp, see **41** in fig. 4) is coupled to the support member at the clamp receiving portion and is held at that location prior to tightening by way of the bolt **45** which is secured to a threaded hole that is integral with frame **12** (col. 3 lines 23-27).

As to independent claim 27, the Schneider enclosure is equipped to handle cables of differing diameters by means of the self-sizing property of grommets **120** and **121** described at

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col. 6 lines 29-43. When unequal diameter cables are coupled to the enclosure, the respective ports present openings having different cross-sectional areas. The enclosure also includes strain relief devices **38-43** as previously described. Given that different diameter cables are involved, the associated strain relief devices would consequently define holes of different cross-sectional area. Thus the Schneider arrangement anticipates claim 27.

As to claim 28, the enclosure further comprises a third strain relief device **49** adjacent to the first strain relief device **41** (see fig. 4), to form a two-stage strain relief system.

As to claims 31 and 32, the enclosure further comprises fiber splice trays **78** (see fig. 7).

As to claims 35 and 36, the enclosure includes removable drop plugs **120/121** which seal the cables in the ports as already described. The plugs also seal the ports when no cables are present (col. 5 lines 46-59).

As to claim 37, the hose clamp strain relief has the recited structure as noted above in relation to claim 11.

Claims 40, 42, 44, 47, and 49-51 are rejected under 35 U.S.C. 102(b) as being anticipated by Daugherty et al. (US 4295005).

Daugherty discloses a strain relief device comprising a support member **22** having a clamp receiving portion, and a clamping device **28** coupled to the support member. See figs. 1-3 and col. 3 lines 6-36. The support member holds the clamping device prior to tightening (by means of a retaining bridge **30**). Thus the Daugherty arrangement satisfies claims 40 and 49.

Claims 42, 44, 50, and 51 are satisfied since the bridge **30** defines a slot in the support member

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22 through which the clamping device **28** is threaded, and the slot in this case is also a hole. As to claim 47, the strain relief device is coupled to a splice enclosure

Claims 40-44, 46, and 49-51 are rejected under 35 U.S.C. 102(b) as being anticipated by Reichle (US 5402315).

Reichle discloses a strain relief device comprising a support member **21** having a clamp receiving portion and a clamping device **9**. See fig. 2. The clamping device is mechanically held by the clamping receiving portion via slots **5**. The device therefore meets the limitations of claims 40, 42-44, 46, and 49-51. As to claim 41, the device **9** is not described in detail but it appears to be a plastic band which is fastened to itself (note the slit near the left end of each band as shown in fig. 2).

Claims 40-46 and 49-51 are rejected under 35 U.S.C. 102(b) as being anticipated by Miles et al. (US 5731546).

Miles discloses a strain relief device for holding an optical fiber in place for splicing with a second optical fiber, comprising a support member **12** having a clamp receiving portion **48**, and a clamping device **50** coupled to the support member at the receiving portion where it is held in place before tightening. The arrangement therefore satisfies claims 40 and 49.

As to claim 41, the clamping device is described as a velcro fastener (col. 3 lines 58-59). Thus the clamping device constitutes a plastic band which can be fastened back on itself.

As to claims 42-44, 46, 50, and 51, the clamp receiving portions **48** comprise slots (which are holes), and the clamping device is threaded through at least a pair of the slots.

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As to claim 45, each slot **48** is cross shaped and has a first opening which is perpendicular to the edge **22** (perpendicular in the sense used in the specification at p. 23 in describing fig. 6B, even though the opening **608a** appears to be parallel to edge **606a**), and further has a second opening which is disposed from the first opening to edge **22**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5, 7, 10, 13-14, 22, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toffetti (cited above).

As to claims 3-5, Toffetti does not disclose the recited types of transmission media although it is noted that the enclosure may be used for telecommunication cables in general (col. 2 lines 6-9). A skilled person would have recognized that the benefits afforded by the Toffetti device are not limited only to optical fiber cables. It would have been obvious to such a person to use the Toffetti arrangement with other types of media cables since the advantages (e.g., more easily obtained hermeticity) taught by Toffetti would also be useful for these other cable types.

As to claims 7, 25 and 26, although no optical splitter is specifically described in Toffetti, it would have been obvious to a person of ordinary skill in the art to include an optical splitter in the housing between the distribution cable and any drop lines since this would allow the total

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number of optical fibers carried in the distribution cable, as well as the number of connections at the source, to be kept reasonably low (as opposed to carrying one fiber for every single drop line, and establishing an individual connection between every one of those fibers and the source).

As to claims 10, 13, and 22, Toffetti does not describe closed drop plugs which seal unused drop ports. It would have been obvious to a person having ordinary skill in the art to initially provide additional drop ports in the Toffetti enclosure so as not to preclude the possibility of future expansion, and it would further have been obvious to provide completely closed drop plugs in order to maintain hermeticity of the enclosure until such additional ports are needed.

As to claim 14, no additional sealing devices between the drop plugs and the drop lines are mentioned in Toffetti. However, since the objective of Toffetti is to provide a hermetically sealed housing, it would have been obvious to a skilled worker to use a supplemental sealing device between the drop plugs and the drop lines (e.g. a sleeve or a layer of sealant compound) when necessary (e.g. when the drop line has a diameter which is slightly smaller than that of the prefabricated plug holes **25** or **28**).

Claims 29-30, 33-34, and 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider et al. (cited above).

As to claims 29 and 30, Schneider shows only hose clamps as the first and second strain relief devices. However, it is noted that hose clamps are merely a representative example of a suitable strain relief device (col. 3 line 20). Self-fastening plastic cable ties are already well known and widely used in the art. A skilled worker would have found it obvious to use such

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plastic ties in place of some of the hose clamps since each plastic tie advantageously comprises only a single part, whereas hose clamps typically include multiple parts (e.g. a band and a bolt 45). Furthermore, a skilled worker would also have realized that hose clamps are advantageous over plastic tie fasteners in that they are repeatably adjustable while ties are usually not.

Therefore it would have been obvious to a person having ordinary skill in the art to use both types of fasteners in the Schneider enclosure in order to benefit from their respective advantages (e.g. hose clamps would be used on cables which are frequently replaced or adjusted, while plastic ties would be used on the more permanent cables).

As to claims 33-34, although Schneider does not specifically disclose an optical splitter it is well known in the art to use an optical splitter to divide optical signals among a number of branch fibers. It would have been obvious to a person of ordinary skill in the art to include an optical splitter in the enclosure since this would enable coupling of optical signals to additional outgoing fibers without having to increase the number of incoming fibers carried in the distribution cable.

Regarding claim 38, Schneider shows a cover plate 152 but does not describe a sealing member to seal the gap between the cover plate and the remainder of the housing 151. Sealing members are routinely used in similar enclosures to prevent ingress of moisture, dust, and so forth. Since Schneider provides an air-tight entry for the cables, it would have been obvious to a skilled worker to provide a sealing member between the cover 152 and bottom portion 151 in order to render the entire enclosure air-tight. Since the cover 152 when closed rests above the drop plugs 120/121, this sealing member would also seal any remaining gap between the cover and the drop plugs as required by claim 39.

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Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Daugherty et al. (cited above).

Daugherty does not specify what type of telecommunication medium is carried by cable 46. It would have been obvious to a person having ordinary skill in the art to use the Daugherty device with an optical fiber cable since it provides strain relief and since it is well known that optical fibers are particularly vulnerable to strain.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6300562, US 5509099, US 5378174, US 5189725, and US 4805979 all disclose relevant enclosures.

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Any inquiry concerning this communication should be directed to Mike Stahl at (703) 305-1520. Official communications eligible for submission by facsimile may be faxed to (703) 308-7724 or (703) 308-7722. Inquiries of a general or clerical nature (e.g., a request for a missing form or paper, etc.) should be directed to the Technology Center 2800 receptionist at (703) 308-0956 or to the technical support staff supervisor at (703) 308-3072.

MJS
Michael J. Stahl
Patent Examiner
Art Unit 2874

February 5, 2003

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